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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

09/980,376

**Applicant(s)**

HAUMONT ET AL.

**Examiner**

JOEL AJAYI

**Art Unit**

2617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-17, 19,21-23,77,79-92,96-100,102,103,105-111 and 113-116 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-17, 19,21-23,77,79-92,96-100,102,103,105-111 and 113-116 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Dispersed Inventive Drawing Review (PTO-842)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 13, 2009 has been entered.

### ***Response to Arguments***

The argument features the release of an active connection.

The examiner respectfully disagrees with the applicant's statement and asserts that the claims disclose monitoring an active connection and releases the connection when there is user inactivity for a predetermined period of time. The connection is released because of inactivity or dormancy. Lim discloses this in col. 7, lines 28-45.

The argument features causing transmission of a release message comprising an indication of the reason for releasing the connection.

The examiner respectfully disagrees with the applicant's statement and asserts that it would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before (Lim, col. 7, lines 28-45) involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

The argument features the release of the same active connection.

The examiner respectfully disagrees with the applicant's statement and asserts that col. 7, lines 32-45, fig. 3d, of Lim, discloses the release of the PPP link. The virtual circuit/virtual channel/virtual connection/virtual network pipeline/virtual link (they are all synonymous, as is well known in the art e.g. Daniel et al., U.S. Patent 5,726,985, col. 3, lines 8-10; col. 4, lines 49-51) set up for the mobile station and PDGN is released because of inactivity/dormancy.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1, 4-13, 19, 23, 77, 79-88, 97-99, 102, 103, 105-108, 110, 111, 113-116** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lim (U.S. Patent Number: 6,404,754)**.

Consider **claim 1**; Lim discloses an apparatus (network node) in a cellular communications network, comprising:

a monitor configured to monitor at least one parameter related to an active connection between a mobile station and a support node (PDGN) (col. 7, lines 28-45), wherein the support node (PDGN) is within a core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2), said at least one parameter comprising user activity (col. 3, lines 54-65; col. 7, lines 32-45); and a determining unit (RNC) configured to determine whether the connection between said support node (PDGN) and said mobile station is to be released based solely on said at least one parameter monitored by said monitor (col. 7, lines 32-45), wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established (col. 3, lines 63-65), and further configured to cause the connection to be released when there is user inactivity for a predetermined period of time (col. 7, lines 32-45), and wherein the apparatus (RNC) is external to the core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Lim discloses the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in

a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claims 4, 23**; Lim discloses that the apparatus (RNC) is further configured to cause sending of a message to the support node indicating that said connection has been released (once the connection is released the PDGN is aware of this) (col. 7, lines 17-45).

Consider **claim 5**; Lim discloses that the apparatus (RNC) is further configured to cause sending of a request for the connection to be released to said mobile station (the mobile station is aware of the release of the connection) (col. 7, lines 17-45).

Consider **claim 6**; Lim discloses that the support node (PDGN) is configured to send a connection release command (dormant state, dormant timer) to said apparatus in response to the release message received by said apparatus, and wherein said apparatus (RNC) is further configured to control the release of said connection (col. 7, lines 17-45).

Consider **claim 7**; Lim discloses that the apparatus (RNC) is further configured to cause sending of a release request to said mobile station in response to the release command received from said support node (PDGN) (the mobile station is aware of the release of the connection) (col. 7, lines 17-45 ).

Consider **claim 8**; Lim discloses that the apparatus (RNC) is further configured to cause sending of a message to said support node (PDGN) advising that the connection has been released (once the connection is released the PDGN is aware of this) (col. 7, lines 17-45).

Consider **claim 9**; Lim discloses an apparatus (RNC), comprising:  
a monitor configured to monitor at least one parameter related to an active connection between a mobile station and a support node (PDGN) (col. 7, lines 28-45), wherein the support

node is within a core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2), said at least one parameter comprising an elapsed time since a last use of the connection (col. 3, lines 54-65; col. 7, lines 32-45); and a determining unit (RNC) configured to determine whether the connection between said support node (PDGN) and said mobile station is to be released based solely on said at least one parameter monitored by said monitor (col. 7, lines 32-45), wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established (col. 3, lines 63-65), and further configured to cause the connection to be released when the connection has not been used for a predetermined time (col. 7, lines 32-45), and wherein the apparatus (RNC) is external to the core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Lim discloses the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claim 10**; Lim discloses that the predetermined time depends on the type of traffic (PPP) for which the connection is intended (col. 7, lines 32-45).

Consider **claim 11**; Lim discloses that the predetermined time depends on the quality of service profile of the traffic (PPP) for which the connection is intended (col. 7, lines 32-45).

Consider **claim 12**; Lim discloses an apparatus (RNC), comprising:

a monitor configured to monitor at least one parameter related to an active connection between a mobile station and a support node (PDGN) (col. 7, lines 28-45), wherein the support node is within a core network of a cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2), said at least one parameter comprising a state of said mobile station (col. 3, lines 5-11, 54-65; col. 7, lines 32-45); and a determining unit (RNC) configured to determine whether the connection between said support node (PDGN) and said mobile station is to be released based solely on said at least one parameter monitored by said monitor (col. 7, lines 32-45), wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established (col. 3, lines 63-65), and further configured to cause the connection to be released based on the state of the mobile station (col. 3, lines 5-11, 54-65; col. 7, lines 32-45), and wherein the apparatus (RNC) is external to the core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Lim discloses the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claim 13**; Lim discloses an apparatus (RNC), comprising:



a monitor configured to monitor at least one parameter related to an active connection between a mobile station and a support node (PDGN) (col. 7, lines 28-45), wherein the support node is within a core network of a cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2), said at least one parameter comprising a movement of the mobile station (inactivity) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45); and a determining unit (RNC) configured to determine whether the connection between said support node (PDGN) and said mobile station is to be released based solely on said at least one parameter monitored by said monitor (col. 7, lines 32-45), wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established (col. 3, lines 63-65), and further configured to cause the connection to be released based on the movement of the mobile station (inactivity) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45), and wherein the apparatus (RNC) is external to the core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Lim discloses the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claims 19, 77, 79-88**; Lim discloses a cellular communications network, comprising: an apparatus, a mobile station and a support node (col. 3, lines 54-65).

Consider **claim 97**; Lim discloses an apparatus (RNC), comprising:

a monitor configured to monitor at least one parameter related to an active connection between a mobile station and a support node (PDGN) (col. 7, lines 28-45), wherein the support node is within a core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2), said at least one parameter comprising at least one of a state of the mobile station (inactive), a movement of the mobile station, or an amount of communications between the mobile station and a radio network controller (col. 3, lines 5-11, 54-65; col. 7, lines 32-45); and a determining unit (RNC) configured to determine whether the connection between said support node (PDGN) and said mobile station is to be released based solely on said at least one parameter (inactivity) monitored by said monitor (col. 7, lines 32-45), wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established (col. 3, lines 63-65), and further configured to cause the connection to be released based said at least one parameter (inactivity) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45), and wherein the apparatus (RNC) is external to the core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Lim discloses the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in

a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claim 98**; Lim discloses an apparatus (RNC) comprising:

a processor configured to monitor at least one parameter related to a connection between a mobile station and a support node (PDGN) (col. 7, lines 28-45), wherein the support node is within a core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2), and to determine whether the connection between said support node (PDGN) and said mobile station is to be released based solely on said at least one parameter (col. 3, lines 54-65; col. 7, lines 32-45), wherein the apparatus (RNC) is configured to cause the connection between the mobile station and the support node (PDGN) to be established (col. 3, lines 63-65), and further configured to cause the connection to be released based said at least one parameter (inactivity) (col. 3, lines 54-65; col. 7, lines 32-45), and wherein the apparatus (RNC) is external to the core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Lim discloses the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claim 99**; Lim discloses a method comprising: directing establishment of an active connection between a mobile station and a support node (PDGN) in a cellular communications network through a radio network controller (col. 3, lines 54-65; col. 7, lines 28-45); monitoring, at the radio network controller, at least one parameter related to the connection between the mobile station and the support node (col. 7, lines 32-45); determining, at the radio network controller, whether the connection between said support node and said mobile station is to be released based solely on said at least one parameter (inactivity) (col. 7, lines 32-45); and directing releasing, by the radio network controller, of the connection between said support node and said mobile station based on said at least one parameter (col. 7, lines 32-45), wherein the support node is within a core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2), and wherein the RNC is external to the core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Lim discloses the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claim 102**; Lim discloses that the apparatus is further configured to cause releasing of the connection between the apparatus and said mobile station dependent solely on only one parameter monitored by said monitor (inactivity) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45).

Consider **claims 103, 111**; Lim discloses that at least one parameter comprises user activity, and determining to release said connection when there is user inactivity for a predetermined period of time (col. 3, lines 5-11, 54-65; col. 7, lines 32-45).

Consider **claims 105, 113**; Lim discloses that monitoring comprises monitoring only one parameter related to the connection between the mobile station and the support node, and wherein the determining comprises determining to release the connection between a network element and said mobile station based solely on the only one monitored parameter (col. 3, lines 5-11, 54-65; col. 7, lines 32-45).

Consider **claim 106**; Lim discloses an apparatus (RNC), comprising:

Monitoring means for monitoring at least one parameter related to an active connection between a mobile station and a support node (PDGN) (col. 7, lines 28-45), wherein the support node is within a core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2), said at least one parameter comprising an elapsed time since a last use of the connection (col. 3, lines 5-11, 54-65; col. 7, lines 32-45); and determining means for determining whether the connection between said support node (PDGN) and said mobile station is to be released based solely on said at least one parameter monitored by said monitoring means (col. 7, lines 32-45), wherein the apparatus (RNC) is configured to cause the connection between the mobile station and the support node (PDGN) to be established (col. 3, lines 63-65), and further configured to cause the connection to

be released when the connection has not been used for a predetermined time (inactivity) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45), and wherein the apparatus (RNC) is external to the core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Lim discloses the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claim 107**; Lim discloses an apparatus(RNC), comprising:

Monitoring means for monitoring at least one parameter related to an active connection between a mobile station and a support node (PDGN) (col. 7, lines 28-45), said at least one parameter comprising a state of said mobile station (inactivity) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45); and wherein the support node is within a core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2), determining means for determining whether the connection between said support node (PDGN) and said mobile station is to be released based solely on said at least one parameter monitored by said monitor (col. 7, lines 32-45), wherein the apparatus (RNC) is configured to cause the connection between the mobile station and the support node (PDGN) to be established (col. 3, lines 63-65), and further configured to cause the connection to be completely released based on the state of the mobile station (inactivity) (col. 3, lines 5-11, 54-

65; col. 7, lines 32-45), and wherein the apparatus (RNC) is external to the core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Lim discloses the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claim 108**; Lim discloses an apparatus (RNC), comprising:

Monitoring means for monitoring at least one parameter related to an active connection between a mobile station and a support node (PDGN) (col. 7, lines 28-45), wherein the support node is within a core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2), said at least one parameter comprising a movement of the mobile station (inactivity) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45); and determining means for determining whether the connection between said support node (PDGN) and said mobile station is to be released based solely on said at least one parameter monitored by said monitor (col. 7, lines 32-45), wherein the apparatus is configured to cause the connection between the mobile station and the support node (PDGN) to be established (col. 3, lines 63-65), and further configured to cause the connection to be released based on the movement of the mobile station (inactivity) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45), and wherein the apparatus (RNC) is external to the core network of the cellular communications

network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Lim discloses the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claim 110**; Lim discloses a computer readable storage medium encoded with instructions that, if executed by a computer, perform a process, the process comprising:

Directing establishment of an active connection between a mobile station and a support node (PDGN) in a communication network through a radio network controller (col. 3, lines 5-11, 54-65; col. 7, lines 28-45); monitoring, at the radio network controller, at least one parameter related to the connection between the mobile station and the support node (col. 3, lines 5-11, 54-65; col. 7, lines 32-45); determining, at the radio network controller, whether the connection between said support node and said mobile station is to be released based solely on said at least one parameter (inactivity) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45); and directing releasing, by the radio network controller, of the connection between said support node and said mobile station based on said at least one parameter (inactivity) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45), wherein the support node is within a core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2), and wherein the RNC is external to the core network of the cellular communications



network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Lim discloses the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claim 114-116**; Lim discloses that the apparatus is a radio network controller (col. 3, lines 5-11, 54-65; col. 7, lines 32-45).

**Claims 14-17, 21, 22, 89-92, 96, 100, 109** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lim (U.S. Patent Number: 6,404,754)** in view of **Stephenson et al. (U.S. Patent Number: 6,119,000)**.

Consider **claim 14**; Lim discloses the claimed invention except: an amount of updating information received in a given time from the mobile station is used as a measure of the movement of the mobile station.

In an analogous art Stephenson discloses that an amount of updating information received in a given time from the mobile station is used as a measure of the movement of the mobile station (column 7, lines 1-21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Lim by including a mobile station's movement, as taught by Stephenson, for the purpose of efficiently managing network resources.

Consider **claim 15**; Stephenson discloses that updating information comprises universal mobile telecommunication systems terrestrial radio access network registration area updates (column 7, lines 1-21).

Consider **claim 16**; Lim discloses an apparatus (RNC), comprising:

A monitor configured to monitor at least one parameter elated to an active connection between a mobile station and a support node (PDGN) (col. 7, lines 28-45), wherein the support node is within a core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45); and a determining unit (RNC) configured to determine if the connection between said support node (PDGN) and said mobile station is to be released dependent solely on said at least one parameter monitored by said monitor (col. 7, lines 32-45), wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established (col. 3, lines 5-11, 54-65; col. 7, lines 32-45), and wherein the apparatus (RNC) is external to the core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Except: at least one parameter comprises a location of the mobile station, and said determining unit is further configured to determine if the connection should be released based on the location of the mobile station monitored by said monitor.

In an analogous art, Stephenson discloses at least one parameter comprises a location of the mobile station, and said determining unit is further configured to determine if the connection should be released based on the location of the mobile station monitored by said monitor (column 6, lines 21-25; column 12, lines 10-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Lim by including a mobile station's movement, as taught by Stephenson, for the purpose of efficiently managing network resources.

Lim and Stephenson disclose the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Consider **claim 17**; Stephenson discloses that at least one parameter comprises associations of the mobile station with different apparatus (MSC and BTS), and said determining unit being further configured to determine that the connection should be released if said monitor indicates that the mobile station is associated with different apparatus (column 6, lines 21-25, 55-59; column 12, lines 10-30).

Consider **claims 21, 100**; Stephenson discloses that the support node is a serving general packet radio service support node (SGSN is responsible for the delivery of data packets to and from mobile stations in its area, MSC performs the same function) (column 6, lines 21-25; column 8, lines 30-39; column 12, lines 10-30).

Consider **claims 22, 96**; Stephenson discloses that the network operates in accordance with a universal mobile telecommunication systems standard (UMTS is based on GSM) (column 6, lines 21-25, 55-59; column 12, lines 10-30).

Consider **claims 89-92**; Lim discloses a cellular communications network, comprising: an apparatus, a mobile station and a support node (col. 3, lines 54-65).

Consider **claim 109**; Lim discloses an apparatus (RNC), comprising:

Monitoring means for monitoring at least one parameter related to an active connection between a mobile station and a support node (PDGN) (col. 7, lines 28-45), wherein the support node is within a core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (fig. 1 and 2) (col. 3, lines 5-11, 54-65; col. 7, lines 32-45); determining means for determining if the connection between said support node and said mobile station is to be released dependent solely on said at least one parameter monitored by said monitor (col. 7, lines 32-45), wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established (col. 3, lines 5-11, 54-65; col. 7, lines 32-45), and wherein the apparatus (RNC) is external to the core network of the cellular communications network (it is well known in the art that any element past the MSC is a part of the core network) (col. 3, lines 54-65; col. 7, lines 32-45; fig. 1 and 2).

Except: at least one parameter comprises a location of the mobile station, and said determining unit is further configured to determine if the connection should be released based on the location of the mobile station monitored by said monitor.

In an analogous art, Stephenson discloses at least one parameter comprises a location of the mobile station, and said determining unit is further configured to determine if the connection

should be released based on the location of the mobile station monitored by said monitor (column 6, lines 21-25; column 12, lines 10-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Lim by including a mobile station's movement, as taught by Stephenson, for the purpose of efficiently managing network resources.

Lim and Stephenson disclose the claimed invention except for the transmission of a release message comprising an indication of the reason for releasing the connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to indicate the reason for releasing the connection, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joel Ajayi whose telephone number is (571) 270-1091. The Examiner can normally be reached on Monday-Friday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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/Joel Ajayi/

Examiner, Art Unit 2617

/LESTER KINCAID/

Supervisory Patent Examiner, Art Unit 2617